WARNING: Please refer to the System Installation Manual for information on limitations regarding product use and function and information on the limitations as to liability of the manufacturer.

Installation Manual

RF5501-433

DLS2002 and higher

version 5.0

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WARNING Please Read Carefully

Note to Installers

This warning contains vital information. As the only individual in contact with system users, it is your responsibility to bring each item in this warning to the attention of the users of this system.

System Failures

This system has been carefully designed to be as effective as possible. There are circumstances, however, involving fire, burglary, or other types of emergencies where it may not provide protection. Any alarm system of any type may be compromised deliberately or may fail to operate as expected for a variety of reasons. Some but not all of these reasons may be:

■ Inadequate Installation

A security system must be installed properly in order to provide adequate protection. Every installation should be evaluated by a security professional to ensure that all access points and areas are covered. Locks and latches on windows and doors must be secure and operate as intended. Windows, doors, walls, ceilings and other building materials must be of sufficient strength and construction to provide the level of protection expected. A reevaluation must be done during and after any construction activity. An evaluation by the fire and/or police department is highly recommended if this service is available.

■ Criminal Knowledge

This system contains security features which were known to be effective at the time of manufacture. It is possible for persons with criminal intent to develop techniques which reduce the effectiveness of these features. It is important that a security system be reviewed periodically to ensure that its features remain effective and that it be updated or replaced if it is found that it does not provide the protection expected.

■ Access by Intruders

Intruders may enter through an unprotected access point, circumvent a sensing device, evade detection by moving through an area of insufficient coverage, disconnect a warning device, or interfere with or prevent the proper operation of the system.

■ Power Failure

Control units, intrusion detectors, smoke detectors and many other security devices require an adequate power supply for proper operation. If a device operates from batteries, it is possible for the batteries to fail. Even if the batteries have not failed, they must be charged, in good condition and installed correctly. If a device operates only by AC power, any interruption, however brief, will render that device inoperative while it does not have power. Power interruptions of any length are often accompanied by voltage fluctuations which may damage electronic equipment such as a security system. After a power interruption has occurred, immediately conduct a complete system test to ensure that the system operates as intended.

■ Failure of Replaceable Batteries

This system's wireless transmitters have been designed to provide several years of battery life under normal conditions. The expected battery life is a function of the device environment, usage and type. Ambient conditions such as high humidity, high or low temperatures, or large temperature fluctuations may reduce the expected battery life. While each transmitting device has a low battery monitor which identifies when the batteries need to be replaced, this monitor may fail to operate as expected. Regular testing and maintenance will keep the system in good operating condition.

■ Compromise of Radio Frequency (Wireless) Devices

Signals may not reach the receiver under all circumstances which could include metal objects placed on or near the radio path or deliberate jamming or other inadvertent radio signal interference.

■ System Users

A user may not be able to operate a panic or emergency switch possibly due to permanent or temporary physical disability, inability to reach the device in time, or unfamiliarity with the correct operation. It is important that all system users be trained in the correct operation of the alarm system and that they know how to respond when the system indicates an alarm.

■ Smoke Detectors

Smoke detectors that are a part of this system may not properly alert occupants of a fire for a number of reasons, some of which follow. The smoke detectors may have been improperly installed or positioned. Smoke may not be able to reach the smoke detectors, such as when the fire is in a chimney, walls or roofs, or on the other side of closed doors. Smoke detectors may not detect smoke from fires on another level of the residence or building.

Every fire is different in the amount of smoke produced and the rate of burning. Smoke detectors cannot sense all types of fires equally well. Smoke detectors may not provide timely warning of fires caused by carelessness or safety hazards such as smoking in bed, violent explosions, escaping gas, improper storage of flammable materials, overloaded electrical circuits, children playing with matches or arson.

Even if the smoke detector operates as intended, there may be circumstances when there is insufficient warning to allow all occupants to escape in time to avoid injury or death.

■ Motion Detectors

Motion detectors can only detect motion within the designated areas as shown in their respective installation instructions. They cannot discriminate between intruders and intended occupants. Motion detectors do not provide volumetric area protection. They have multiple beams of detection and motion can only be detected in unobstructed areas covered by these beams. They cannot detect motion which occurs behind walls, ceilings, floor, closed doors, glass partitions, glass doors or windows. Any type of tampering whether intentional or unintentional such as masking, painting, or spraying of any material on the lenses, mirrors, windows or any other part of the detection system will impair its proper operation.

Passive infrared motion detectors operate by sensing changes in temperature. However their effectiveness can be reduced when the ambient temperature rises near or above body temperature or if there are intentional or unintentional sources of heat in or near the detection area. Some of these heat sources could be heaters, radiators, stoves, barbeques, fireplaces, sunlight, steam vents, lighting and so on.

■ Warning Devices

Warning devices such as sirens, bells, horns, or strobes may not warn people or waken someone sleeping if there is an intervening wall or door. If warning devices are located on a different level of the residence or premise, then it is less likely that the occupants will be alerted or awakened. Audible warning devices may be interfered with by other noise sources such as stereos, radios, televisions, air conditioners or other appliances, or passing traffic. Audible warning devices, however loud, may not be heard by a hearing-impaired person.

■ Telephone Lines

If telephone lines are used to transmit alarms, they may be out of service or busy for certain periods of time. Also an intruder may cut the telephone line or defeat its operation by more sophisticated means which may be difficult to detect.

■ Insufficient Time

There may be circumstances when the system will operate as intended, yet the occupants will not be protected from the emergency due to their inability to respond to the warnings in a timely manner. If the system is monitored, the response may not occur in time to protect the occupants or their belongings.

■ Component Failure

Although every effort has been made to make this system as reliable as possible, the system may fail to function as intended due to the failure of a component.

■ Inadequate Testing

Most problems that would prevent an alarm system from operating as intended can be found by regular testing and maintenance. The complete system should be tested weekly and immediately after a break-in, an attempted break-in, a fire, a storm, an earthquake, an accident, or any kind of construction activity inside or outside the premises. The testing should include all sensing devices, keypads, consoles, alarm indicating devices and any other operational devices that are part of the system.

■ Security and Insurance

Regardless of its capabilities, an alarm system is not a substitute for property or life insurance. An alarm system also is not a substitute for property owners, renters, or other occupants to act prudently to prevent or minimize the harmful effects of an emergency situation.

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Table of Contents

TABLE OF CONTENTS

Introduction 2

Section 1: Installation 3

1.1 Unpacking ... 3
1.2 Mounting ... 3
1.3 Wiring ... 3
1.4 Applying Power ... 4
1.5 Enrolling the Keypad ... 4
1.6 Downloading ... 5
1.7 Compatible Wireless Devices ... 5
1.8 Batteries ... 5

Section 2: Keypad Programming 6

2.1 Programming the Keypad ... 6
2.2 Function Key Options ... 6
2.3 Clock Options ... 6
2.4 Alarms Displayed While Armed Option ... 7
2.5 Emergency (Fire, Auxiliary, Panic) Key Options ... 7
2.6 Door Chime Options ... 7
2.7 Low Temperature Alert ... 8

Section 3: Receiver Programming 9

Enroll & Program Devices ... 9
3.1 Identified Wireless Keys ... 9
3.2 Enroll Wireless Devices Using Zones ... 9
3.3 A Note About Electronic Serial Numbers ... 10
3.4 Enroll Wireless Devices Using Zones ... 10
3.5 RF5501-433 PGM Outputs ... 11
3.6 Deleting Wireless Devices ... 11

Section 4: Other Programming 12

4.1 Program Zones and Partitions ... 12
4.2 Enable Receiver Supervision ... 12
4.3 Enable Supervision of Wireless Zones ... 13
4.4 RF Jam Detect Zone ... 13
4.5 Receiver Software Default ... 14
4.6 Keypad Software Default ... 14

Section 5: Testing & Mounting 15

5.1 Test the placement of wireless devices ... 15
5.2 Test WLS909 and WLS919 Reception ... 16

Section 6: Additional Notes 17

6.1 Trouble Conditions ... 17
6.2 Replacing Batteries in Wireless Devices ... 17
6.3 Replacing Batteries in Wireless Devices ... 17

Section 7: Troubleshooting 18

Section 8: Programming Worksheets 19

Appendix A: Guidelines for Locating Smoke Detectors 28

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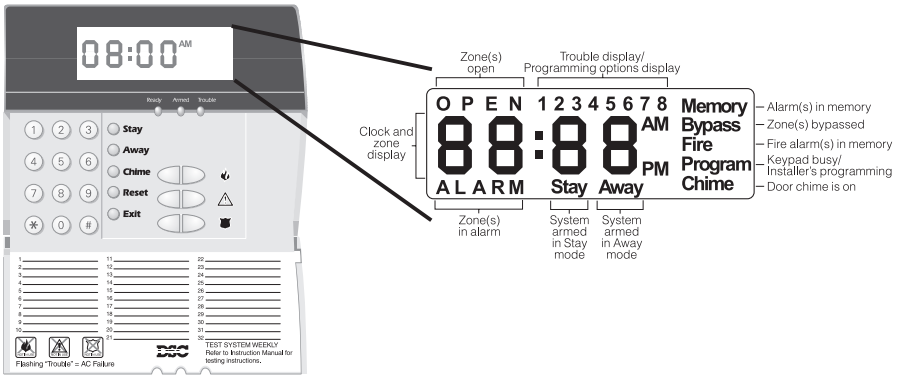
I N T R O D U C T I O N



Introduction

The RF5501-433 keypad combines a standard PC5132 receiver with an LCD5501Z keypad that presents system status using an LCD-style display with fixed messages. With the addition of the receiver portion, the control panel will now support up to 32 zones. The RF5501-433 is compatible with the following DSC security systems:

- PC5010 (all versions)
- PC1555(MX)/1565 v2.3 & higher
- PC5008 v2.3 & higher
- PC5015 (all versions)
- Power608 v2.3 & higher
- PC580/585 v2.3 & higher
- PC5020 (all versions)

***NOTE:** Control panels previous to version 2.3 support 8 wireless zones. Only one RF5501 keypad can be connected per system. If more keypads are required please select other DSC compatible keypads for the system being installed.*

Specifications and Features

- Maximum Current Draw: 220 mA (with back lighting boost on and both PGMs drawing maximum current of 50 mA each)
- Frequency: 433.92 mHz
- Voltage: 12V
- Zones - receiver can receive signals from up to 32 wireless zones
- Supervisory - programmable supervisory window, 4 to 24 hours
- Location
  - can be wired up to 1000ft. / 305m from the main panel with 22 gauge wire
  - for longer wire runs, thicker gauge wire must be used.
- The wiring used in this circuit connection shall be insulated with PVC, TFE, PTFE, FEP neoprene or polymide.
- Compatibility: The RF5501-433 can be connected to the following panels: PC5010, PC5015, PC5020, PC5008, PC1555/1565, PC580/585
- Connects to control panel via 4-wire Keybus
- One keypad zone input
- Optional tamper version
- Five programmable function keys
- Ready (green), Armed (red) and Trouble (yellow) status lights
- Up to 2 open collector type PGM outputs
- Low temperature zone option (see section 2.7)

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Installation

S E C T I O N 1

1.1 Unpacking

The RF5501-433 package includes the following parts:

- One RF5501-433 keypad
- Two 5.6K Ohm resistor
- Four mounting screws
- One keypad inner door label
- One set of Fire, Auxiliary and Panic key labels
- One LCD5501Z User Sheet
- One RF5501-433 Installation Manual

1.2 Mounting

You should mount the keypad where it is accessible to designated points of entry and exit. Once you have selected a dry and secure location, perform the following steps to mount the keypad:

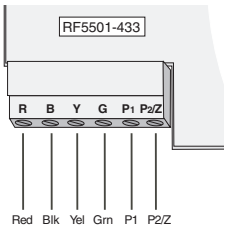
1. Remove the keypad backplate by loosening the screw located at the base of the unit.
2. Secure the keypad backplate to the wall in the desired location. Use the screws provided.
3. Before attaching the keypad to its backplate, complete the keypad wiring as described in the next section.

Ensure the mounting location is:

- *Dry*
- *Central to the proposed placement of all wireless devices*
- *Far from sources of interference, including electrical noise (computers, televisions, electric motors in appliances and heating & air conditioning units), large metal objects such as heating ducts and plumbing which may shield the antenna.*

1.3 Wiring

1. Before beginning to wire the unit, ensure that all power (AC transformer and battery) is disconnected from the control panel.
2. Connect the four Keybus wires from the control panel (red, black, yellow, green) to the keypad terminals (R B Y G). Consult the diagram below:



NOTE: *P_1 and P_2 are open collector programmable outputs. Refer to the control panel manual for proper hook-up diagram. P_2 is also the zone input terminal when programmed (see section [90]). DEOL is supported by this keypad.*

3. You can connect a device, such as a door contact, to the "Z" terminal of the RF5501-433. This eliminates the need to run wires back to the control panel for the device. To connect the zone, run one wire from the device to the Z terminal and the other wire from the device to the B (black) terminal. For powered devices, run the red wire to the R (positive) terminal and the black wire to the B (negative) terminal. When using end of line supervision, connect the zone according to one of the configurations outlined in your system's *Installation Manual*.

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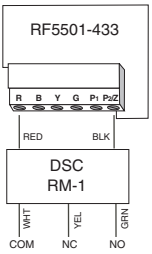
4. Each PGM output is an open collector switch to ground. That is, when the PGM output is activated by the RF5501-433 the terminal will switch to ground. P1 can sink up to 50 mA of current to activate LEDs or a small buzzer. Connect the positive side of the LED or buzzer to AUX+, the negative side to P1. If more than 50 mA of current is required a relay must be used. Please refer to diagram.



1.4 Applying Power

Once all wiring is complete, apply power to the control panel:

1. Connect the battery leads to the battery.
2. Connect the AC transformer.

For more information on control panel power specifications, see the control panel *Installation Manual*.

***NOTE:** Do not connect the power until all wiring is complete and unit is securely mounted.*

1.5 Enrolling the Keypad

Once all wiring is complete, you will need to enter a 2-digit number that tells the system the partition and slot assignment of the keypad.

If your system has partitions, you will also need to assign the keypad to a partition (1st digit).

The slot assignment (2nd digit) tells the panel which keypad slots are occupied. The panel can then generate a fault when a keypad supervisory signal is not present. There are eight available slots for keypads. RF5501-433 keypads are always assigned to slot 1 by default. You will need to assign each keypad to its own slot (1 to 8).

***NOTE:** The RF5501-433 enrolls as two modules:*

1 = keypad section of the RF5501-433

17 = receiver section of the RF5501-433

Enter the following at each keypad installed on the system:

1. Enter Installer Programming by pressing [*][8][Installer's Code]
2. Press [000] for Keypad Programming
3. Press [0] for Partition and Slot Assignment
4. Enter a two digit number to specify the partition and slot assignment.

***NOTE:** If your system does not have partitions, enter [1] for the first digit.*

1st digit	Enter 0 for Global Keypad, 1-8 for keypad partition Enter 1 for Partition 1 Keypad Enter 2 for Partition 2 Keypad
2nd digit	Enter 1 to 8 for Slot Assignment

5. Press the [#] key twice to exit programming.
6. After assigning all keypads, perform a supervisory reset by entering [*][8][Installer's Code][902]. The panel will now supervise all assigned keypads and enrolled modules on the system.

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To review which modules the control panel is currently supervising:

1. Enter [✱][8][Installer's Code]
2. Enter [903] to display all modules. On the RF5501-433 keypad, **1** and **17** will scroll on the keypad to indicate that the RF5501-433 is present on the system. **1** designates the keypad section, and **17** is used to show the receiver section is also supervised. If using an LCD5501Z keypad, scroll until the module name appears on the display.
3. To exit press [#].

If both modules do not show on the keypad, one of the following conditions may be present:

- the keypad is not connected properly to the Keybus
- there is a problem with the Keybus wiring run
- the keypad does not have enough power

1.6 Downloading

This product has an integrated RF5501-433 v5.0 receiver. When downloading to this keypad, please select the PC5132-433 v5.0 file. DLS2002 and greater must be used in order to have the capability of downloading to this keypad.

1.7 Compatible Wireless Devices

Please refer to the Instruction sheets of the following devices for more information.

The RF5501-433 v5.0 can receive signals from the following devices:

- WLS904L-433 Motion Detector
- WLS904PL-433 Pet Immune PIR
- WLS906-433 Smoke Detector
- WLS907-433 Universal Transmitter
- WLS907T-433 Low Temperature Sensor
- WLS912L-433 Glass Break Detector
- WLS914-433 Pet Immune PIR
- WLS909-433 Wireless Key
- WLS919-433 Wireless Key
- WLS925L-433 Mini Door/Window Contact

1.8 Batteries

The wireless devices are designed to use only specific brands and types of batteries. Please see the appropriate instruction sheet for detailed information on the battery brands and types.

***NOTE**: Do not use brands of batteries other than those specified. Using any other brand may affect system operation.*

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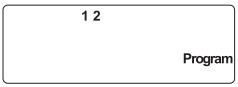
SECTION 2

2.1 Programming the Keypad

There are several programming options available for the RF5501-433 keypad. These are described below. Record all your programming choices in the programming worksheets included in this manual.

Programming the RF5501-433 is similar to programming the rest of the system. When you are in the RF5501-433 programming sections, the keypad will display which options are turned on along the top of the display. To turn an option on or off, press the number corresponding to the option on the number pad. The numbers of the options that are currently turned ON will be displayed.

For example, if options 1 and 2 are on, the display will look like this:



For information on programming the rest of your security system, please refer to your system's *Installation Manual*.

2.2 Function Key Options

The function keys are programmed in sections [1] to [5]. By default, the 5 function keys on the keypad are programmed as Stay Arm (03), Away Arm (04), Chime (06), Sensor Reset (14) and Quick Exit (16). You can change the function of each key on every keypad. Please see your system's *Installation Manual* for instructions on programming the keys, and a complete list of all the function key options available for your system.

2.3 Clock Options

The RF5501-433 will display the current time after 30 seconds of no key presses. To set the correct time and date for the system, please refer to your system's *Instruction Manual*. You can change how the keypad displays the time with the following options. To change the clock options:

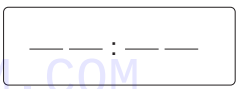
1. Enter [*][8][Installer Code]
2. Enter [000] to go to keypad programming
3. Enter section [6] to go to clock options.
4. To turn any of the options on or off, press [1], [2], or [3]:

***NOTE:** If the **Time does not display on keypad** option is selected, make sure that the **Keypad displays time when zones are open** option is also selected.*

- [1] ON = Time displays on keypad
  OFF = Time does not display on keypad
- [2] ON = Clock display is in AM/PM format (e.g. 08:00 AM)
  OFF = Clock display is in 24-hour format (e.g. 20:00)
- [3] ON = Keypad does not display time when zones are open
  OFF = Keypad displays time when zones are open

5. When you are finished programming the clock options, press [#] to exit.

***NOTE:** On a PC5020 v3.2 and higher, if a Loss of Clock trouble is present on the system, the display will be as shown:*



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2.4 Alarms Displayed While Armed Option

You can disable the display of alarms on the keypad when the system is armed. The display of alarms is enabled by default. To disable the display of alarms when the system is armed, turn off section [6], option [5]:

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming
3. To turn the display of alarms on or off, enter section [6].
4. Turn option [5] on or off:
   [5] ON = Alarms not displayed while system is armed
   OFF = Alarms are always displayed while system is armed
5. When you are finished, press [#] to exit.

2.5 Emergency (Fire, Auxiliary, Panic) Key Options

You can enable or disable the Fire, Auxiliary and Panic keys at each keypad. These keys are enabled by default. Please see your system's *Installation Manual* for more information on these keys and their options. To turn any of the emergency keys on or off on the keypad:

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming
3. Enter section [7].
4. To turn the emergency key options on or off, press [1], [2], or [3]:
   [1] ON = Fire key enabled
   OFF = Fire key disabled
   [2] ON = Auxiliary key enabled
   OFF = Auxiliary key disabled
   [3] ON = Panic key enabled
   OFF = Panic key disabled
5. When you are finished, press [#] to exit.

2.6 Door Chime Options

You can program the RF5501-433 keypad to sound a tone when any zone is opened or closed. There are two parts to the RF5501-433 door chime programming:

- Program if the RF5501-433 will chime when zones are opened and/or closed.
- Program the type of sound the RF5501-433 will make when an individual zone is opened or closed.

For the door chime feature to work, you will also need to turn on the Door Chime attribute for each zone that will trigger the chime. This programming is done in the control panel software. Refer to your control panel's *Installation Manual* for more information.

Door Chime on Zone Openings/Closings

You can program each RF5501-433 keypad to sound a door chime when zones are opened and/or when they are closed. By default, RF5501-433 keypads are programmed to sound door chimes on both zone openings and closings.

To change the door chime opening/closing settings, at each RF5501-433 keypad:

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming
3. Enter section [6].
4. To turn the options on or off, press [6] or [7]:

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[6] ON = Door Chime Enabled for Zone Openings
OFF = Door Chime Disabled for Zone Openings
[7] ON = Door Chime Enabled for Zone Closings
OFF = Door Chime Disabled for Zone Closings

5. When you are finished, press [#] to exit.

Door Chime Sounds

You can program the RF5501-433 keypad to make different door chime sounds for individual zones, or groups of zones. Each RF5501-433 keypad can make any of four door chime sounds for each zone that triggers the door chime:

- 4 quick beeps (default sound)
- 'Bing – Bing' tone
- 'Ding – Dong' tone
- 'Alarm' tone

NOTE**: For a zone to be able to trigger the door chime sound, the Door Chime zone attribute must also be enabled in the control panel programming. Please see your control panel **Installation Manual.

To change the door chime sounds:

1. Enter [*][8][Installer Code].
2. Enter [*] to go to door chime sound programming.
3. Enter a 2-digit number for the zone you want to program [01] - [32].
4. Turn one of the following options on by pressing [1], [2], [3], or [4]:
   [1] 4 quick beeps (default sound)
   [2] 'Bing – Bing' tone
   [3] 'Ding – Dong' tone
   [4] 'Alarm' tone

***NOTE**: Ensure that only one of the above options is turned on. If more than one is on, the keypad will sound the first option that is enabled. If none of the options are selected, the keypad will not make any sound when the zone is opened or closed.*

5. To program the door chime sound for another zone, repeat steps 3 and 4.
6. When you are finished programming the door chime sounds, press [#] to exit.

2.7 Low Temperature Alert

The RF5501-433 keypad is capable of detecting a low temperature environment. Once enabled and the zone input disabled (see section [90]), the keypad will report an alarm condition. If the environment becomes less than 6°C. Once the temperature is greater than 8° C, the zone will restore depending on zone type and panel status.

Enter [*][8] [Installer Code]

Enter [000]

Enter Section [7]

Press [8] to enable/disable temperature sensor

[8] ON = Low Temperature Alert enabled
OFF = Low Temperature Alert disabled

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Enroll & Program Devices

This section describes how to enroll and program:

- wireless devices using zones (WLS904PL-433, WLS906-433, WLS907-433, WLS912L-433, WLS914-433 and WLS925L-433)
- wireless keys (WLS909-433, WLS919-433)

For more information on these devices, read the instruction sheet included with each device.

3.1 Identified Wireless Keys

Reporting by the system of openings/closings by individual wireless keys and command output [✱][7] activation by wireless key buttons may be supported on certain control panels. To do this, the system will reserve access codes 17 – 32 for wireless keys 01-16 respectively. You must program one access code for each wireless key (using [✱][5] access code programming) for this feature to work correctly.

***NOTE**: Program these access codes on the system* after *you have connected the RF5501-433 to the Keybus (see section 2.4).*

Refer to your system *Installation Manual* for information on access code programming.

Opening/Closing By Wireless Key Reporting

***NOTE**: The Identified Wireless Key Closing option is only available with the PC5020, P-8+, PC501X v2.0 and higher, P832/DL v2.0 and higher, PC1555(MX), P-6B(MX), PC580/585 v2.0 and higher, P-48 v2.0 and higher by turning section [015] option 4 off.*

To enable the reporting of openings and closings by identified wireless keys:

- Make sure the control panel is v2.0 or higher
- Program a valid access code for each key
- Program a closing and opening reporting code for each key's access code
- Turn off the **Quick Arm** option in section [015] option [4] of the control panel programming

To ensure that an *unidentified wireless key* cannot disarm the system, turn off section [017], option [1] (in the control panel programming). This option is available in control panels with software version 2.1 or higher.

3.2 Enroll Wireless Devices Using Zones

Enroll wireless devices which use zones (universal transmitters, motion detectors, smoke detectors, and panic pendants):

1. At a system keypad, enter [✱][8][Installer's code] to go the installer's programming section.
2. Enter programming section [804].
3. Enter the 2-digit number corresponding to the zone the device is to occupy ([01] to [32]).

***NOTE**: Hardwired and wireless devices cannot be assigned to the same zone. PC5108 zone expander modules occupy zones in 2 groups of 4 (e.g. zones 9-12 and zones 13-16). None of the zones assigned to a PC5108 module may be used for wireless devices. For more information on zone assignment, consult your system* **Installation Manual.**

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5. The device is now enrolled on the system. Record the serial number and the assigned zone number in the programming worksheets in the back of this manual.
6. Continue with steps 3 - 5 until you have enrolled all wireless devices.
7. To exit press [#].

***NOTE**: The devices will not work properly until you complete zone and partition programming (see section 4).*

3.3 A Note about Electronic Serial Numbers

An electronic serial number (ESN) is printed on the back of each wireless key. ESNs are used to enroll the wireless keys with the RF5501-433 receiver.

In order to reduce the occurrence of wireless keys with the same serial number, 6-digit serial numbers are now printed on the back of each wireless key. The 6-digit serial numbers include hexadecimal digits. For instructions on programming hexadecimal numbers, see your system *Installation Manual*, Section 4: How to Program.

***NOTE**: 6-digit serial numbers are only supported on the following control panels: PC5020, P-8+, PC501X v2.0 & higher, P832/DL v2.0 and higher, PC1555(MX), P-6B(MX), PC580/585 and P-48.*

The (P)WLS909-433 and (P)WLS919-433 keys have both a 5-digit and a 6-digit serial number printed on them. When connecting the RF5501-433 to a PC5010 v1.x or P-832 v1.x panel, enter 5-digit serial numbers only. When connecting the RF5501-433 to a PC5020, P-8+, PC5015 v2.x and higher, P832DL v2.x and higher, PC5010 v2.0 and higher, P832 v2.0 and higher, PC1555(MX), P-6B(MX), PC580/585 or P-48 panel enter the 6-digit serial number.

3.4 Enroll & Program Wireless Keys

For wireless keys to work on the system, you need to enroll them and then program the function buttons, if the default values are not the functions desired. Wireless keys are not assigned to zones and require no zone programming. You can enroll up to 16 wireless keys on the system.

Enroll Wireless keys

1. At a system keypad, enter [✱][8][Installer's Code] to go to the installer's programming section.
2. Enter programming section [804].
3. Enter a 2-digit number [41]-[56] to program the wireless key serial number. These numbers correspond to wireless key numbers 01- 16.
4. Enter the key's ESN. The entry *must* be six digits.
5. The key is now enrolled on the system. Record the serial number and the assigned slot number in the programming worksheets in the back of this manual.
6. Repeat steps 3 - 5 until all wireless keys have been enrolled.
7. **(PC5020/P-8+/PC501X/P832/P832DL only)** By default, all wireless keys are assigned to Partition 1. To assign keys to different partition, see programming section [69].

NOTE: A wireless key can only be assigned to one partition.

8. To exit press [#].

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Program the (P)WLS909-433 or (P)WLS919-433 Function Buttons

(P)WLS909-433 and (P)WLS919-433 wireless keys have four programmable function buttons. Default functions have been assigned, but you may program other functions if desired. After the functions are programmed, when you press and hold one of the four buttons for one second, the system will execute the programmed function.

For systems using partitions (PC5020/P-8+/PC501X/P832/P832DL only): All wireless keys assigned to Partition 1 will have the four functions programmed in section [61]. All wireless keys assigned to Partition 2-8 will have the four functions programmed in section [62-68]. For example, if function button 1 in Section [61] is programmed for Stay arming, then pressing the first button on wireless keys assigned to Partition 1 will Stay arm Partition 1.

***NOTE**: Wireless keys will not work when the partition they are assigned to is being accessed for zone bypassing or programming.*

1. At a system keypad, enter [✱][8][Installer's Code].
2. Enter programming section [804].
3. Enter programming section [61] to [68] for partitions 1 to 8.
4. For each of the 4 function buttons, enter the 2-digit number of the function you want to select. See the programming worksheets in the back of this manual for a list of function key options.
5. Record your programming choices in the worksheets in the back of the manual.
6. To exit press [#].

3.5 RF5501-433 PGM Outputs

The RF5501-433 has two on-board open collector PGM outputs. Each of these can be individually programmed to:

1. Follow main panel PGM outputs 1 to 14.

***NOTE:** Please refer to your System Installation Manual for available PGM outputs.*

***NOTE:** If the RF5501-433 is connected to the PC580/5PC85/PC1555/PC1565/P-48/P-6B (all versions), PC5010 v1.x, P832 v1.x or the WSS5010 1.0, 2.1, the RF5501 PGM outputs cannot be programmed to follow main panel PGM outputs 1 or 2.*

2. Activate for a programmable amount of time when a signal is received from a wireless key programmed with output option 31 or 32 (RF5501 PGM pulse) and the PGM output programming section [70] or [71] is programmed with option 15 (RF5501 PGM pulse). The amount of time that the PGM outputs can be programmed to remain on is programmed in sections [72] and/or [73]. The default activation time is 5 seconds.
3. Toggle state when a signal is received from a wireless key programmed with option 31 or 32 and the PGM output programming section [70] or [71] is programmed with option 16 (RF5501 PGM toggle).

3.6 Deleting Wireless Devices

To remove a wireless device from the system, follow the guideline for adding a wireless device. Program the ESN as [000000]. The wireless device for the zone will be removed.

Now that you have enrolled all the wireless devices, you will need to program the system to work properly with the devices. See section 4 for more information.

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Other Programming

S E C T I O N 4

4.1 Program Zones and Partitions

Now that you have enrolled the wireless devices, you should complete all zone programming on the system. Although the exact programming required varies depending on which control panel the RF5501-433 is connected to, you should check that the following programming areas are completed correctly for each wireless zone:

- Enable zones and/or assign zones to one or more partitions (programming sections [201]-[209], [201]-[265] for PC5020).
- Program the definition for each zone (programming sections [001]-[004]).

***NOTE**: WLS906 wireless smoke detectors must be assigned to zones defined as Delay 24-hr fire (wireless) [87] or Standard 24-hr fire (wireless) [88] for proper supervision.*

- Enable the wireless zone attribute for each wireless zone (PC580/585, PC1555/1565, PC5008, PC5010 v2.0 and higher, PC5020, PC5015 v2.2 and higher only) (programming sections [101]-[132]).

See your system *Installation Manual*, for more information on each of the above programming sections.

4.2 Enable PC5132 Supervision

The control panel will supervise the PC5132 receiver portion of the RF5501-433 via the Keybus after at least one device has been enrolled on the module (see section 3.2 “Enrolling Wireless Devices”).

To activate module supervision, after you enroll the first device(s):

1. Exit and then re-enter Installer Programming
2. Enter programming section [902]. Wait approximately 1 minute.
3. To exit press [#].

The system will generate a General System Supervisory trouble if the module is removed from the Keybus. If you need to remove the PC5132 portion of the RF5501-433 module from an existing system, you will have to disable supervision of the PC5132.

***NOTE**: Deleting all devices from the RF5501-433 or defaulting the RF5501-433 will cause a PC5132 supervisory fault.*

To disable PC5132 supervision:

1. Disconnect the RF5501-433 from the Keybus
2. Enter [✱][8][Installer Code]
3. Enter [902]. The control panel will clear all supervision and re-scan the system for connected modules. The scan will take approximately one minute.
4. To exit press [#]

To review which modules the control panel is currently supervising:

1. Enter [✱][8][Installer Code]
2. Enter [903] to display all modules. On LED keypads, light [17] will indicate that the PC5132 is present on the system. On LCD keypads, scroll until the module name appears on the display
3. To exit press [#]

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If the PC5132 portion of the RF5501-433 module does not show on the keypad, one of the following conditions may be present:

- the module is not connected properly to the Keybus
- there is a problem with the Keybus wiring run
- the module does not have enough power
- no devices have been enrolled on the RF5501-433

4.3 Enable Supervision of Wireless Zones

***NOTE**(for PC5010 v1.x control panels only):* *For UL Listed installation, Double EOL resistors must be enabled in the PC5010 for the wireless zones to be supervised. If normally Closed or Single EOL resistors are selected the PC5010 will not be able to supervise the wireless devices. If a wireless device stops sending a supervisory signal (the unit stops functioning) the panel will not indicate a supervisory trouble condition unless Double EOL resistors are used. In addition, all hardwire zones must be wired for Double EOL resistors. For more information, refer to your PC5010 v1.x Installation Manual.*

***NOTE:** (PC5010 v2.0 and higher, PC5015 v2.2 and higher, PC5020, PC5008, PC1555/1565, PC580/585 only):* *For wireless supervision to work, you must enable the wireless zone attribute on all wireless zones (sections [101] to [132], option [8] ON).*

***NOTE:** The RF Jam Detect zone must have the supervision option disabled.*

Wireless Supervisory Window

Each wireless zone will send a supervisory signal every 64 minutes. If the receiver does not receive a signal within the time programmed for the **Wireless Supervisory Window**, it will generate a supervisory fault.

To program the wireless supervisory window:

1. Enter [✱][8][Installer Code] to enter Installer Programming.
2. Enter [804] to enter into Receiver Programming.
3. Enter sections [81].
4. Enter the time period for the supervisory window. The window is programmed in 15 minute increments. The default programming is 96 (x15minutes), which is equal to 24 hours. Valid entries are (16) - (96), equal to 4 - 24 hours.
5. To exit press [#].

Disable/Enable Zone Supervision

All wireless zones have supervision enabled by default. To disable supervision for any zone, enter the following at any system keypad:

1. Enter [✱][8][Installer Code] to enter Installer Programming.
2. Enter [804] to enter the RF5501 Module Programming.
3. Enter sections 82-85. Enable and disable zone supervision by turning on/off the corresponding zone toggle option.
4. To exit press [#].

4.4 Jamming Signal Detection

The RF5501-433 receiver detects jamming signals that can prevent the receiver from properly receiving transmissions from enrolled devices. When jamming signals are detected, the panel can report a jamming trouble condition in one of two ways. By default, the panel will report an RF Jam Trouble (General System Tamper on the PC5010).

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To turn OFF jamming signal detection:

1. Enter [✱][8][Installer Code] to enter Installer Programming.
2. Enter [804] to enter the PC5132 Module Programming.
3. *Turn ON* section [90], option [7].
4. To exit press [#].

The RF5501-433 can also be programmed to indicate the jamming trouble condition with the RF Jam Zone. For RF Jam Zone to work, you must select an unused zone to be used as the RF Jam Detect zone. When the receiver detects an attempt to jam the RF signal, the RF Jam Detect zone will be violated and the system will generate a tamper signal. When the jamming signal is gone, the RF Jam Detect zone closes and the system sends a tamper restore signal.

To enable RF jamming detection:

1. Enter [*] [8] [Installer's Code].
2. Enter programming section [804].
3. Enter section [93]. Enter the 2-digit number of the RF Jam Detect zone ([01] to [32]) in the programming section.
4. Disable supervision for the RF Jam detect zone by turning the relevant option off in section [82], [83], [84] or [85]. (See section 4.3 for more information.)
5. RF jamming detection is now enabled. To exit Installer programming, press [#].

NOTE: A jamming condition will be indicated as RF Jam Zone if section [93] is programmed, regardless of the RF Jam indicates Trouble option (section [90], option [7]).

4.5 Receiver Software Default

Returning the receiver programming to factory default settings is a quick way to remove all the enrolled devices from the system and reset all the programming in section [804].

***NOTE**: Performing this procedure will not change any programming sections except [804]. Resetting the control panel to factory default settings will* not *return the RF5501-433 to factory default settings.*

To restore the PC5132 portion of the RF5501-433 programming to the factory default settings, perform the following:

1. Enter [✱][8] [Installer's Code].
2. Enter programming section [996].
3. Enter the Installer's Code, followed by [996] again. Press [#]. The software for the receiver section will be restored to its factory default settings.

For instructions on restoring the default programming of the control panel or any other connected module, see your system *Installation Manual*.

4.6 Keypad Software Default

To restore the keypad defaults, perform the following:

1. Enter [✱][8] [Installer's Code].
2. Press [✱][99][✱].

***NOTE:** This does not affect the PC5132 portion of the keypad.*

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SECTION 5

5.1 Test the Reception of Wireless Devices

It is very important to test the proposed placement of each wireless device before it is mounted. Following these steps will test the placement of the wireless motion detectors (WLS904P/WLS914), wireless smoke detectors (WLS906), wireless glassbreak detectors (WLS912) and wireless door/window contacts (WLS907/WLS925L), based on the signal strength between the RF5501-433 and the device.

***NOTE**: You cannot test the Wireless Keys (WLS909/WLS919) in this mode. See section 5.2 for instructions on testing these devices. You cannot run a placement test on the RF Jam Detect zone.*

1. Temporarily place the device you want to test in the place you want to mount it.
2. At a system keypad, enter [✱][8][Installer Code].
3. Enter programming section [904].
4 Enter the 2-digit zone number for the device to be tested.
5. Activate the device being tested until a result is displayed on the keypad or sounded by the keypad or bell.

   WLS904P(L)-433/WLS914-433: Remove the detector from its backplate, wait for 1-2 seconds, then reattach the detector to its backplate.
   WLS906-433: Remove the detector from its backplate, wait for 5 seconds, then reattach the detector to its backplate. Or hold a magnet near the raised line on the outer rim. Then remove the magnet.

   WLS907-433/WLS925L-433: Open and close the contact by moving the magnet away from the unit. If the unit is attached to a door or a window, open and close the door or window to activate the device.

   WLS912L-433: Press and hold the test mode tab for 5 seconds. Release the test mode tab. The keypad will display the test result.
6. Read the test results at the keypad:

Result	LED Keypad	LCD Keypad	Buzzer/Bell
Good	Light 1 On Steady	"Good"	1 Beep/Squawk
Bad	Light 3 On Steady	"Bad"	3 Beeps/Squawks

Activate the device until you get 3 good results in a row. Wait 10 seconds between each test on the same device. You may mount wireless devices where results were good.

Devices indicating a bad result must be moved to another location. You may only have to move the device a few inches to correct a bad result.

***NOTE**: Do not mount any device where a "bad" test result was indicated.*

If several wireless devices produce BAD test results, you may need to move the RF5501-433 to a better location.

7. To test another device, press [#] once, then repeat steps 4 - 6. Continue to test the devices until both the RF5501-433 and the devices are in good locations.
8. To exit installer programming, press [#] twice.

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5.2 Test WLS909 & WLS919 Reception

The wireless key (WLS909) cannot be tested using the module placement test described above. To ensure that the RF5501-433 is receiving transmissions from these devices, conduct the following tests:

WLS909/WLS919: Use the function keys to arm and disarm the system at several different points in the installation.

If these devices do not operate from all points in the installation, you will need to move the RF5501-433 receiver. Moving the RF5501-433 higher will usually improve the reception.

If you move the RF5501-433, repeat the tests described in sections 5.1 and 5.2 on all the wireless devices. Continue to test the devices until you have found satisfactory locations for the RF5501-433 and the WLS904P, WLS906 and WLS907 devices, and there is good reception between the RF5501-433 and the WLS909 device.

Mount the Wireless Devices

If you have conducted the placement test described in section 5.1 and got 3 “Good” results in a row for each device, you can mount the wireless devices. See the *Installation Sheet* for each device for mounting instructions.

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Additional Notes

S E C T I O N 6

6.1 Trouble Conditions

The control panel always watches for possible trouble conditions. If a trouble condition occurs, the keypad "Trouble" light will turn on and the keypad will beep. Press [✱][2] to display the trouble conditions.

The following trouble conditions apply to the receiver portion (identified as the PC5132 by the panel) and/or any enrolled devices. For a description of all troubles, please see your system *Installation Manual*. The following trouble conditions apply to the RF5501-433 and/or any enrolled devices.

General System Tamper - This trouble is generated when the RF5501-433 plastic cover is removed and/or if there is a jamming condition present.

General System Supervisory - This trouble will be indicated if the panel loses communication with any module connected to the Keybus. The event buffer will log a detailed description of the event.

Device Low Battery - This trouble is generated when a wireless device exhibits a low battery condition. Press [7] one, two, or three times to view which devices are experiencing battery failure. An LED keypad will indicate battery failure using zone lights 1 to 8.

Zone Tamper - This trouble is generated when an enrolled wireless device is removed from its mounting location.

Zone Fault - Each wireless zone will send a supervisory signal every 64 minutes. If the receiver does not receive a signal within the time programmed for the Wireless Supervisory Window, it will generate a zone fault.

Tamper Switches

Removing the RF5501-433 from its mounting location will cause a general system tamper.

Wireless Zone Low Battery Transmission

Within the supervisory transmission, the device will indicate the status of the battery. If a battery is low, the system will indicate a Device Low Battery trouble. The system will delay reporting the event to the central station for the number of days programmed for **Zone Low Battery Transmission Delay** in section [370]. This will prevent unnecessary reporting of the event if the user has been instructed on how to replace batteries.

6.2 Jamming Signal Detection

The RF5501-433 receiver detects jamming signals that can prevent the receiver from properly receiving transmissions from enrolled devices. See section 4.4 "Jamming Signal Detection" for information on jamming signal detection programming.

6.3 Replacing Batteries in Wireless Devices

1 Remove the cover of the device from its backplate. This creates a tamper condition on the zone.

2 Refer to the battery installation instructions on the *Installation Sheet* of each component. Be sure to note the proper orientation of the batteries as you install them.

3 When the fresh batteries are in place, re-attach the cover to the backplate. The tamper is restored and the zone sends a battery trouble restoral signal to the receiver. The battery trouble is now clear and the device should function normally.

***NOTE**: When batteries in one device need to be replaced, the batteries in all devices should be replaced at the same time.*

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Troubleshooting

SECTION 7

1. When I enter the 2-digit zone number when adding a wireless device, the keypad gives me a long beep.

You cannot enter ESNs unless the RF5501-433 is properly connected to the Keybus. See sections 1 & 3 for instructions on setting up and wiring the RF5501 module.

2. I have entered the ESN for the device but when I violate the device, the zone does not show open on the keypad.

Check the following:

- Ensure the ESN has been entered correctly
- Ensure that the zone is enabled for the partition (if partition programming is used).
- Ensure that the wireless zone is not assigned to a zone used by PC5108 modules, an on-board zone or a keypad zone.
- Ensure that the zone is programmed for something other than "Null Operation and that the wireless zone attribute is turned on.

3. When I try a module placement test I get no result or "Bad" results.

Check the following (see sections 5.1 and 5.2 for more information on testing devices):

- Verify that you are testing the correct zone
- Verify that the correct ESN was entered when the device was enrolled
- Verify that the device is in range of the RF5501-433. Try testing the device in the same room as the receiver.
- Confirm that the RF5501-433 is properly connected to the Keybus.
- Check that you are testing the zone correctly.
- Check that the batteries are working and installed correctly.
- Look for large metal objects that may be preventing the signal from reaching the RF5501-433.

The device must be located where consistent "Good" results are obtained. If several devices show "Bad" results, or if panic pendants and wireless keys operate inconsistently, move the receiver.

4. The LED on the motion detector does not turn on when I walk in front of the unit.

The LED is for walk test purposes only. See your WLS904-433/WLS904P(L)-433 *Instruction Sheet* for walk test instructions.

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[000] Keypad Programming

1. Enter [*][8][Installer's code]
2. Enter [000] to go to keypad programming

[0] Keypad Enrollment

Valid entries are 01-88; e.g. enter [11] for partition 1, slot 1. Default = 11

1st digit	Enter 0 for Global Keypad Enter 1 for Partition 1 Keypad Enter 2 for Partition 2 Keypad etc.
2nd digit	Enter 1 to 8 for Slot Assignment

Slot: |____|____|

[1]-[5] Function Key Assignments

	[1] Key 1	[2] Key 2	[3] Key 3	[4] Key 4	[5] Key 5
Defaults:	03 Stay	04 Away	06 Chime	14 Reset	16 Exit
	|____|____| |____|____| |____|____| |____|____| |____|____|

[6] RF5501-433 Keypad Options

Default		Option	On	Off
ON	|____| 1	Local Clock Display Enabled	Display Disabled
ON	|____| 2	Local Clock Displays AM/PM	Displays 24-hour Time
OFF	|____| 3	Open Zones Override Clock Display	Do Not Override Clock
OFF	|____| 4	For Future Use	
OFF	|____| 5	Alarms Not Displayed While Armed	Always Displayed While Armed
OFF	|____| 6	Door Chime Enabled for Zone Openings	Door Chime Disabled
OFF	|____| 7	Door Chime Enabled for Zone Closings	Door Chime Disabled
OFF	|____| 8	For Future Use	

[7] Emergency Key Options

Default		Option	On	Off
ON	|____|	1	[F] Key Enabled	[F] Key Disabled
ON	|____|	2	[A] Key Enabled	[A] Key Disabled
ON	|____|	3	[P] Key Enabled	[P] Key Disabled
OFF	|____|	4-7	For Future Use	
OFF	|____|	8	Low Temperature Alert Enabled	Low Temperature Alert Disabled

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[*] Door Chime Sound Programming

1. Enter [*][8][Installer's code][*]
2. Enter 2-digit zone number [01] - [32], then select door chime sound option [1] - [4]. Repeat for each zone that is to sound a chime.

Zone	Location	[1] 4 Beeps (default)	[2] "Bing-bing"	[3] "Ding-dong"	[4] Alarm tone
[01]					
[02]					
[03]					
[04]					
[05]					
[06]					
[07]					
[08]					
[09]					
[10]					
[11]					
[12]					
[13]					
[14]					
[15]					
[16]					
[17]					
[18]					
[19]					
[20]					
[21]					
[22]					
[23]					
[24]					
[25]					
[26]					
[27]					
[28]					
[29]					
[30]					
[31]					
[32]					

NOTE: *Options 5-8 are for future use and must be OFF.*

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Zone	Location	[1] 4 Beeps (default)	[2] "Bing-bing"	[3] "Ding-dong"	[4] Alarm tone
[33]					
[34]					
[35]					
[36]					
[37]					
[38]					
[39]					
[40]					
[41]					
[42]					
[43]					
[44]					
[45]					
[46]					
[47]					
[48]					
[49]					
[50]					
[51]					
[52]					
[53]					
[54]					
[55]					
[56]					
[57]					
[58]					
[59]					
[60]					
[61]					
[62]					
[63]					
[64]					

[99][*] Keypad Default

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[804] Wireless Expansion Programming (PC5132 portion)

- 6-digit entry is required. **See Section 3.1 "A note on Electronic Serial Numbers" for details on programming 6-digit serial numbers.**
- When enrolling devices with a 5-digit entry, please use the 5-digit serial number printed on the device.

Zone Serial Numbers

Default = 000000

[01] Zone 1 _____ **[17]** Zone 17 _____

[02] Zone 2 _____ **[18]** Zone 18 _____

[03] Zone 3 _____ **[19]** Zone 19 _____

[04] Zone 4 _____ **[20]** Zone 20 _____

[05] Zone 5 _____ **[21]** Zone 21 _____

[06] Zone 6 _____ **[22]** Zone 22 _____

[07] Zone 7 _____ **[23]** Zone 23 _____

[08] Zone 8 _____ **[24]** Zone 24 _____

[09] Zone 9 _____ **[25]** Zone 25 _____

[10] Zone 10 _____ **[26]** Zone 26 _____

[11] Zone 11 _____ **[27]** Zone 27 _____

[12] Zone 12 _____ **[28]** Zone 28 _____

[13] Zone 13 _____ **[29]** Zone 29 _____

[14] Zone 14 _____ **[30]** Zone 30 _____

[15] Zone 15 _____ **[31]** Zone 31 _____

[16] Zone 16 _____ **[32]** Zone 32 _____

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Wireless Key Serial Numbers

Default = 000000

[41] Key 01 _____

[42] Key 02 _____

[43] Key 03 _____

[44] Key 04 _____

[45] Key 05 _____

[46] Key 05 _____

[47] Key 07 _____

[48] Key 08 _____

[49] Key 09 _____

[50] Key 10 _____

[51] Key 11 _____

[52] Key 12 _____

[53] Key 13 _____

[54] Key 14 _____

[55] Key 15 _____

[56] Key 16 _____

Wireless Key Function Key Options

Entry	Key Description	Entry	Key Description
00	Null Key	**17**	[✱][1] Reactivate Stay/Aways
01-02	*For Future Use*	**18**	*For Future Use*
03	Stay Arm	**19**	[✱][7][3] Command Output #3
04	Away Arm	**20**	For Future Use
05	[✱][9] No-Entry Arm	**21**	[✱][7][4] Command Output #4
06	[✱][4] Chime ON/OFF	**22-26**	*For Future Use*
07	[✱][6][ ][4] System Test	**27**	Disarm (OFF)
08-12	*For Future Use*	**28**	Fire Alarm
13	[✱][7][1] Command Output #1	**29**	Auxiliary Alarm
14	[✱][7][2] Command Output #2 / Sensor Reset	**30**	Panic Alarm
15	*For Future Use*	**31**	RF5501 PGM1 Pulse
16	[✱][0] Quick Exit	**32**	RF5501 PGM2 Pulse

* Sensor Reset can be used when the RF5501-433 is connected to the PC5010. Command outputs are not available for PC5010 software v1.x.

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Wireless Key Options

Partition 1 Wireless Key Options

[61] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

Partition 2 Wireless Key Options

[62] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

Partition 3 Wireless Key Options

[63] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

Partition 4 Wireless Key Options

[64] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

Partition 5 Wireless Key Options

[65] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

Partition 6 Wireless Key Options

[66] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

Partition 7 Wireless Key Options

[67] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

Partition 8 Wireless Key Options

[68] Function Key 1 **03** ___ Function Key 3 **27** ___

Function Key 2 **04** ___ Function Key 4 **30** ___

[69] Wireless Keys (1-16) Partition Assignments

Default = 01

Wireless Key 01 ___

Wireless Key 02 ___

Wireless Key 03 ___

Wireless Key 04 ___

Wireless Key 05 ___

Wireless Key 06 ___

Wireless Key 07 ___

Wireless Key 08 ___

Wireless Key 09 ___

Wireless Key 10 ___

Wireless Key 11 ___

Wireless Key 12 ___

Wireless Key 13 ___

Wireless Key 14 ___

Wireless Key 15 ___

Wireless Key 16 ___

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Entry	Description		
00	Null (No Operation)	09	PC5208 PGM9
01	Main Panel PGM1	10	PC5208 PGM10
02	Main Panel PGM2	11	PC5204 PGM11
03	PC5208 PGM3	12	PC5204 PGM12
04	PC5208 PGM4	13	PC5204 PGM13
05	PC5208 PGM5	14	PC5204 PGM14
06	PC5208 PGM6	15	PC5102 PGM Pulse (local)
07	PC5208 PGM7	16	PC5102 PGM Toggle (local)
08	PC5208 PGM8		

[70] RF5501 PGM1 Output Option
Default 01

PGM1 Output Option └┘└┘

RF5501-433 Output Options

[71] RF5501 PGM2 Output Option
Default 02

PGM2 Output Option └┘└┘

[72] RF5501 - PGM1 Output Activation Time

Default 00

PGM1 Output Activation Time (Minutes) └┘└┘
Default 05

PGM1 Output Activation Time (Seconds) └┘└┘

[73] RF5501 - PGM2 Output Activation Time

Default 00

PGM2 Output Activation Time (Minutes) └┘└┘

Default 05

PGM2 Output Activation Time (Seconds) └┘└┘

NOTE: *Sections [72] and [73] have a valid minimum programmable value of 00 minutes 01 seconds, and a valid maximum programmable value of 99 minutes 99 seconds.*

Supervision

[81] Wireless supervisory Window
Default = 96 └┘└┘ The window is programmed in 15 minute increments. The default programming is 96 (x 15minutes), which is equal to 24 hours. Valid entries are (16) - (96), equal to 4 - 24 hours.

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[82] Zone Device Supervision Options (1-8)

Default = ON		Option ON	Option OFF
☐	Option 1	Zone 01 Supervision enabled	Disabled
☐	Option 2	Zone 02 Supervision enabled	Disabled
☐	Option 3	Zone 03 Supervision enabled	Disabled
☐	Option 4	Zone 04 Supervision enabled	Disabled
☐	Option 5	Zone 05 Supervision enabled	Disabled
☐	Option 6	Zone 06 Supervision enabled	Disabled
☐	Option 7	Zone 07 Supervision enabled	Disabled
☐	Option 8	Zone 08 Supervision enabled	Disabled

[83] Zone Device Supervision Options (9-16)

Default = ON		Option ON	Option OFF
☐	Option 1	Zone 09 Supervision enabled	Disabled
☐	Option 2	Zone 10 Supervision enabled	Disabled
☐	Option 3	Zone 11 Supervision enabled	Disabled
☐	Option 4	Zone 12 Supervision enabled	Disabled
☐	Option 5	Zone 13 Supervision enabled	Disabled
☐	Option 6	Zone 14 Supervision enabled	Disabled
☐	Option 7	Zone 15 Supervision enabled	Disabled
☐	Option 8	Zone 16 Supervision enabled	Disabled

[84] Zone Device Supervision Options (17-24)

Default = ON		Option ON	Option OFF
☐	Option 1	Zone 17 Supervision enabled	Disabled
☐	Option 2	Zone 18 Supervision enabled	Disabled
☐	Option 3	Zone 19 Supervision enabled	Disabled
☐	Option 4	Zone 20 Supervision enabled	Disabled
☐	Option 5	Zone 21 Supervision enabled	Disabled
☐	Option 6	Zone 22 Supervision enabled	Disabled
☐	Option 7	Zone 23 Supervision enabled	Disabled
☐	Option 8	Zone 24 Supervision enabled	Disabled

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[85] Zone Device Supervision Options (25-32)

Default = ON		Option ON	Option OFF
____	Option 1	Zone 25 Supervision enabled	Disabled
____	Option 2	Zone 26 Supervision enabled	Disabled
____	Option 3	Zone 27 Supervision enabled	Disabled
____	Option 4	Zone 28 Supervision enabled	Disabled
____	Option 5	Zone 29 Supervision enabled	Disabled
____	Option 6	Zone 30 Supervision enabled	Disabled
____	Option 7	Zone 31 Supervision enabled	Disabled
____	Option 8	Zone 32 Supervision enabled	Disabled

[90] Other Options

Default		Option	ON	OFF
OFF	____	1-5	For Future Use	
ON	____	6	Keypad Zone Enabled	PGM2 Enabled
OFF	____	7	RF Jam Detect Disabled	RF Jam Detect Enabled
OFF	____	8	Global Placement Test	Individual Placement Test

RF Jamming Detection

[93] RF Jam Detect Zone
Default = 00

____ Select an unused zone that will be set to the tamper state when a jamming signal is detected. (Valid entries = 01 - 32, 00 = No RF Jam tone selected)

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Guidelines for Locating Smoke Detectors

A P P E N D I X A

Experience has shown that all hostile fires in family living units generate smoke to a greater or lesser extent. Experiments using typical fires in family living units indicate that detectable quantities of smoke precede detectable levels of heat in most cases. In existing homes, NFPA Standard 72 requires that a smoke detector be installed outside each sleeping area and on each additional story of the family unit.

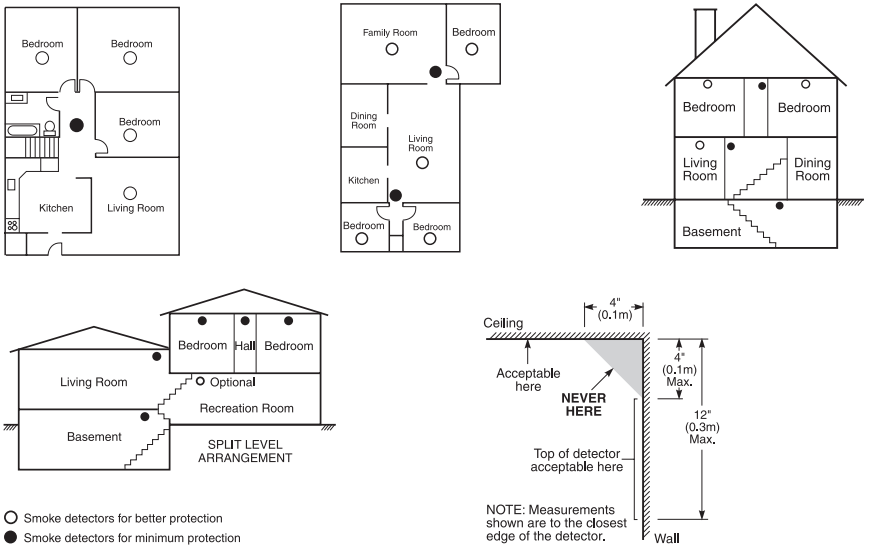
On smooth ceilings, detectors may be spaced 9.1m (30 feet) apart as a guide. Other spacing may be required depending on ceiling height, air movement, the presence of joists, uninsulated ceilings, etc. Consult National Fire Alarm Code NFPA 72, CAN/ULS-S553-M86 or other appropriate national standards for installation recommendations.

Do not locate smoke detectors at the top of peaked or gabled ceilings; the dead air space in these locations may prevent the unit from detecting smoke.

Avoid areas with turbulent air flow, such as near doors, fans or windows. Rapid air movement around the detector may prevent smoke from entering the unit.

Do not locate detectors in areas of high humidity.

Do not locate detectors in areas where the temperature rises above 38°C (100°F) or falls below 5°C (41°F).



Smoke detectors should always be installed in accordance with NFPA 72, the National Fire Alarm Code. Smoke detectors should always be located in accordance with:

- Paragraph 2-2.1.1.1 of NFPA 72: *"Smoke detectors shall be installed outside of each separate sleeping area in the immediate vicinity of the bedrooms and on each additional story of the family living unit, including basements and excluding crawl spaces and unfinished attics. In new construction, a smoke detector also shall be installed in each sleeping room."*
- Paragraph 2-2.1.1.2 of NFPA 72: *"Split level arrangement. Smoke detectors are required where shown. Smoke detectors are optional where a door is not provided between living room and recreation room."*

! *The Smoke Detector is designed to use Eveready Energizer E91 Alkaline Batteries. Do not use other brands of batteries with the Smoke Detector. Using brands other than the Eveready Energizer will void UL approval, and may affect the system's operation.*

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LIMITED WARRANTY

Digital Security Controls Ltd. warrants the original purchaser that for a period of twelve months from the date of purchase, the product shall be free of defects in materials and workmanship under normal use. During the warranty period, Digital Security Controls Ltd. shall, at its option, repair or replace any defective product upon return of the product to its factory, at no charge for labour and materials. Any replacement and/or repaired parts are warranted for the remainder of the original warranty or ninety (90) days, whichever is longer. The original purchaser must promptly notify Digital Security Controls Ltd. in writing that there is defect in material or workmanship, such written notice to be received in all events prior to expiration of the warranty period. There is absolutely no warranty on software and all software products are sold as a user license under the terms of the software license agreement included with the product. The Customer assumes all responsibility for the proper selection, installation, operation and maintenance of any products purchased from DSC. Custom products are only warranted to the extent that they do not function upon delivery. In such cases, DSC can replace or credit at its option.

International Warranty

The warranty for international customers is the same as for any customer within Canada and the United States, with the exception that Digital Security Controls Ltd. shall not be responsible for any customs fees, taxes, or VAT that may be due.

Warranty Procedure

To obtain service under this warranty, please return the item(s) in question to the point of purchase. All authorized distributors and dealers have a warranty program. Anyone returning goods to Digital Security Controls Ltd. must first obtain an authorization number. Digital Security Controls Ltd. will not accept any shipment whatsoever for which prior authorization has not been obtained.

Conditions to Void Warranty

This warranty applies only to defects in parts and workmanship relating to normal use. It does not cover:

- damage incurred in shipping or handling;
- damage caused by disaster such as fire, flood, wind, earthquake or lightning;
- damage due to causes beyond the control of Digital Security Controls Ltd. such as excessive voltage, mechanical shock or water damage;
- damage caused by unauthorized attachment, alterations, modifications or foreign objects;
- damage caused by peripherals (unless such peripherals were supplied by Digital Security Controls Ltd.);
- defects caused by failure to provide a suitable installation environment for the products;
- damage caused by use of the products for purposes other than those for which it was designed;
- damage from improper maintenance;
- damage arising out of any other abuse, mishandling or improper application of the products.

Items Not Covered by Warranty

In addition to the items which void the Warranty, the following items shall not be covered by Warranty: (i) freight cost to the repair centre; (ii) products which are not identified with DSC's product label and lot number or serial number; (iii) products disassembled or repaired in such a manner as to adversely affect performance or prevent adequate inspection or testing to verify any warranty claim. Access cards or tags returned for replacement under warranty will be credited or replaced at DSC's option. Products not covered by this warranty, or otherwise out of warranty due to age, misuse, or damage shall be evaluated, and a repair estimate shall be provided. No repair work will be performed until a valid purchase order is received from the Customer and a Return Merchandise Authorisation number (RMA) is issued by DSC's Customer Service.

Digital Security Controls Ltd.'s liability for failure to repair the product under this warranty after a reasonable number of attempts will be limited to a replacement of the product, as the exclusive remedy for breach of warranty. Under no circumstances shall Digital Security Controls Ltd. be liable for any special, incidental, or consequential damages based upon breach of warranty, breach of contract, negligence, strict liability, or any other legal theory. Such damages include, but are not limited to, loss of profits, loss of the product or any associated equipment, cost of capital, cost of substitute or replacement equipment, facilities or services, down time, purchaser's time, the claims of third parties, including customers, and injury to property. The laws of some jurisdictions limit or do not allow the disclaimer of consequential damages. If the laws of such a jurisdiction apply to any claim by or against DSC, the limitations and disclaimers contained here shall be to the greatest extent permitted by law. Some states do not allow the exclusion or limitation of incidental or consequential damages, so that the above may not apply to you.

Disclaimer of Warranties

This warranty contains the entire warranty and shall be in lieu of any and all other warranties, whether expressed or implied (including all implied warranties of merchantability or fitness for a particular purpose) and of all other obligations or liabilities on the part of Digital Security Controls Ltd. Digital Security Controls Ltd. neither assumes responsibility for nor authorizes any other person purporting to act on its behalf to modify or to change this warranty, nor to assume for it any other warranty or liability concerning this product.

This disclaimer of warranties and limited warranty are governed by the laws of the province of Ontario, Canada.

WARNING: Digital Security Controls Ltd. recommends that the entire system be completely tested on a regular basis. However, despite frequent testing, and due to, but not limited to, criminal tampering or electrical disruption, it is possible for this product to fail to perform as expected.

Out of Warranty Repairs

Digital Security Controls Ltd. will at its option repair or replace out-of-warranty products which are returned to its factory according to the following conditions. Anyone returning goods to Digital Security Controls Ltd. must first obtain an authorization number. Digital Security Controls Ltd. will not accept any shipment whatsoever for which prior authorization has not been obtained.

Products which Digital Security Controls Ltd. determines to be repairable will be repaired and returned. A set fee which Digital Security Controls Ltd. has predetermined and which may be revised from time to time, will be charged for each unit repaired.

Products which Digital Security Controls Ltd. determines not to be repairable will be replaced by the nearest equivalent product available at that time. The current market price of the replacement product will be charged for each replacement unit.

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FCC COMPLIANCE STATEMENT

CAUTION: Changes or modifications not expressly approved by Digital Security Controls Ltd. could void your authority to use this equipment.

This equipment generates and uses radio frequency energy and if not installed and used properly, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for Class B device in accordance with the specifications in Subpart "B" of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in any residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to television or radio reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Re-orient the receiving antenna
- Relocate the alarm control with respect to the receiver
- Move the alarm control away from the receiver
- Connect the alarm control into a different outlet so that alarm control and receiver are on different circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the FCC helpful: "How to Identify and Resolve Radio/Television Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, D.C. 20402, Stock # 004-000-00345-4.

IC: 160A-RF550143

The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

DSC erklærer herved at denne komponenten overholder alle viktige krav samt andre bestemmelser gitt i direktiv 1999/5/EC.

Por este meio, a DSC, declara que este equipamento está em conformidade com os requisitos essenciais e outras determinações relevantes da Directiva 1999/5/EC.

"DSC bekräftar härmed att denna apparat uppfyller de väsentliga kraven och andra relevanta bestämmelser i Direktivet 1999/5/EC".

Con la presente la Digital Security Controls Ltd dichiara che questo prodotto è conforme ai requisiti essenziali ed altre disposizioni rilevanti relative alla Direttiva 1999/05/CE.

"Por la presente, DSC, declara que este equipo cumple con los requisitos requeridos por la Directiva 1999/5/EC".

Hierdurch erklärt DSC, daß dieses Gerät den erforderlichen Bedingungen und Vorrausetzungen der Richtlinie 1999/5/EC entspricht.

'Δία του παρόντος, η DSC, δηλώνει ότι αυτή η συσκευή είναι σύμφωνη με τις ουσιώδης απαιτήσεις και με όλες τις άλλες σχετικές αναφορές της Οδηγίας 1999/5/EC'.

Hierbij verklaart DSC dat dit toestel in overeenstemming is met de eisen en bepalingen van richtlijn 1999/5/EC.

Par la présente, DSC déclare que cet article est conforme aux éxigences essentielles et autres relevantes stipulations de la directive 1999/5/EC.

DSC vakuuttaa laitteen täyttävän direktiivin 1999/5/EC olennaiset vaatimukset.

Hereby, DSC, declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

The complete R & TTE Declaration of Conformity can be found at www.dsc.com/intl/rttedirect.htm.

CE

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Direct all comments concerning this publication to **pubs@dscltd.com**

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